

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 18-Aug-15
 Applicant/Owner: Alaska Energy Authority Sampling Point: **SW15_T326_07**
 Investigator(s): GVF Landform (hillside, terrace, hummocks etc.): Hillside
 Local relief (concave, convex, none): undulating Slope: 21.2 % / 12.0 ° Elevation: _____
 Subregion: Cook Inlet Mountains Lat.: _____ Long.: _____ Datum: WGS84
 Soil Map Unit Name: _____ NWI classification: **Upland**

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: rather wet due recent rains	

VEGETATION -Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				
1. <u>Betula neoalaskana</u>	20	<input checked="" type="checkbox"/>	FACU	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>20.0%</u> (A/B)
2. <u>Picea glauca</u>	15	<input checked="" type="checkbox"/>	FACU	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
Total Cover:		35		
Sapling/Shrub Stratum 50% of Total Cover: <u>17.5</u> 20% of Total Cover: <u>7</u>				
1. <u>Alnus viridis ssp. sinuata</u>	55	<input checked="" type="checkbox"/>	FAC	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL Species <u>0</u> x 1 = <u>0</u> FACW Species <u>3</u> x 2 = <u>6</u> FAC Species <u>79</u> x 3 = <u>237</u> FACU Species <u>93.1</u> x 4 = <u>372.4</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>175.1</u> (A) <u>615.4</u> (B) Prevalence Index = B/A = <u>3.515</u>
2. <u>Oplopanax horridus</u>	15	<input type="checkbox"/>	FACU	
3. <u>Ribes triste</u>	5	<input type="checkbox"/>	FAC	
4. <u>Viburnum edule</u>	5	<input type="checkbox"/>	FACU	
5. <u>Rosa acicularis</u>	3	<input type="checkbox"/>	FACU	
6. <u>Linnaea borealis</u>	1	<input type="checkbox"/>	FACU	
7. <u>Vaccinium ovalifolium</u>	1	<input type="checkbox"/>	FAC	
8. <u>Sambucus racemosa</u>	0.1	<input type="checkbox"/>	FACU	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover:		85.1		
Herb Stratum 50% of Total Cover: <u>42.55</u> 20% of Total Cover: <u>17.02</u>				
1. <u>Dryopteris expansa</u>	20	<input checked="" type="checkbox"/>	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Phegopteris connectilis</u>	10	<input checked="" type="checkbox"/>	FACU	
3. <u>Calamagrostis canadensis</u>	5	<input type="checkbox"/>	FAC	
4. <u>Athyrium cyclosorum</u>	5	<input type="checkbox"/>	FAC	
5. <u>Rubus pedatus</u>	5	<input type="checkbox"/>	FAC	
6. <u>Sanguisorba canadensis</u>	3	<input type="checkbox"/>	FACW	
7. <u>Gymnocarpium dryopteris</u>	3	<input type="checkbox"/>	FACU	
8. <u>Equisetum arvense</u>	2	<input type="checkbox"/>	FAC	
9. <u>Equisetum sylvaticum</u>	1	<input type="checkbox"/>	FAC	
10. <u>Streptopus amplexifolius</u>	1	<input type="checkbox"/>	FACU	
Total Cover:		55		
50% of Total Cover:		27.5	20% of Total Cover:	11
Plot size (radius, or length x width) <u>15m</u> % Cover of Wetland Bryophytes (Where applicable) _____ % Bare Ground <u>80</u> Total Cover of Bryophytes <u>10</u>				
Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>				
Remarks: 3% Spinulum annotinum (FACU)				

SOIL

Sampling Point: SW15_T326_07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1							Fibric Organics	
1-4							Hemic Organics	
4-6							Sapric Organics	
6-8	10YR	2/2	100				Silt Loam	
8-23	10YR	3/2	100				Loamy Sand	w/ rounded gravel

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix ² Location: PL=Pore Lining. RC=Root Channel. M=Matrix

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol or Histel (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Alaska Gleyed (A13) <input type="checkbox"/> Alaska Redox (A14) <input type="checkbox"/> Alaska Gleyed Pores (A15)	<p>Indicators for Problematic Hydric Soils:³</p> <input type="checkbox"/> Alaska Color Change (TA4) ⁴ <input type="checkbox"/> Alaska Alpine swales (TA5) <input type="checkbox"/> Alaska Redox With 2.5Y Hue <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer <input type="checkbox"/> Other (Explain in Remarks)
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³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present
⁴ Give details of color change in Remarks

Restrictive Layer (if present): Type: Depth (inches):	Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:
no hydric soil indicators

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (any one is sufficient)</u></p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<p><u>Secondary Indicators (two or more are required)</u></p> <input type="checkbox"/> Water Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5)
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<p>Field Observations:</p> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 18 Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 17	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks:
recent rains evident in pit. no wetland hydrology indicators.